THE BROCHURE SERIES

OF ARCHITECTURAL ILLUSTRATION.

VOL. III. APRIL, 1897. NO. 4.

CAPITALS FROM S. SPIRITO, FLORENCE.

THE church of S. Spirito, together with its monastery, was built in 1292 by the Augustinians, and was at that time an institution of considerable size and importance. With increasing population a larger edifice was, however, found desirable; and in 1433 work was begun anew under the direction of Filippo Brunelleschi. A number of difficulties prevented the immediate carrying out of his design, among which was the complete destruction of the building by fire when nearly finished. It was, however, rebuilt from the original models after Brunelleschi's death. Brunelleschi was in the habit, it was said, of making only a rough model for his buildings, leaving details vague and uncertain, and giving his directions to the masons as the work proceeded, altering and modifying the design. "This," says Horner, "must account for various defects in S. Spirito, which some critics have attributed to one Antonio Manetti, a workman who had been a pupil of Brunelleschi, but who later set up as his rival, and ventured to disparage his designs." In spite of defects, nevertheless, the church is a fine example of the master's design. Its erection required more than twenty years. The cupola, designed by Salvi d'Andrea, was finished in 1482. The sacristy was added in 1488 from a design by Giuliano di San Gallo, and the beautiful little vestibule which connects the sacristy with the church and cloister, was the joint work of Simone Pollajuolo (surnamed Il Cronaca) and Giuliano di San Gallo. The sculpture of the interior was executed by Jacapo Sansovino. The cupola of the sacristy was designed by Antonio dei Pollajuolo. Frescoes, decorations and enrichments of all descriptions were added by the foremost artists of the time, until the building, like so many others of this period, is a monument to the memory of some of the greatest names of the Italian Renaissance.

It was in the church of S. Spirito that Martin Luther preached as an Augustinian friar when he went to Florence on his road to Rome. His name was inscribed in the books of the monastery, but the library was dispersed after the suppression of the Italian monasteries by the French, towards the end of the last century.

The interior of S. Spirito is very effective from its simplicity and large and beautiful proportions. It is in the form of a Latin cross, 315 feet long and 191 feet across the transepts. The aisles are carried round the nave and transepts by a line of columns with Corinthian capitals. The chapel floors are raised a step above the pavement of the nave, which peculiarity Brunelleschi is said to have copied from the little church of SS. Apostoli, which he so greatly admired that he refused to admit an error in the composition. The choir in the centre is a marvel-

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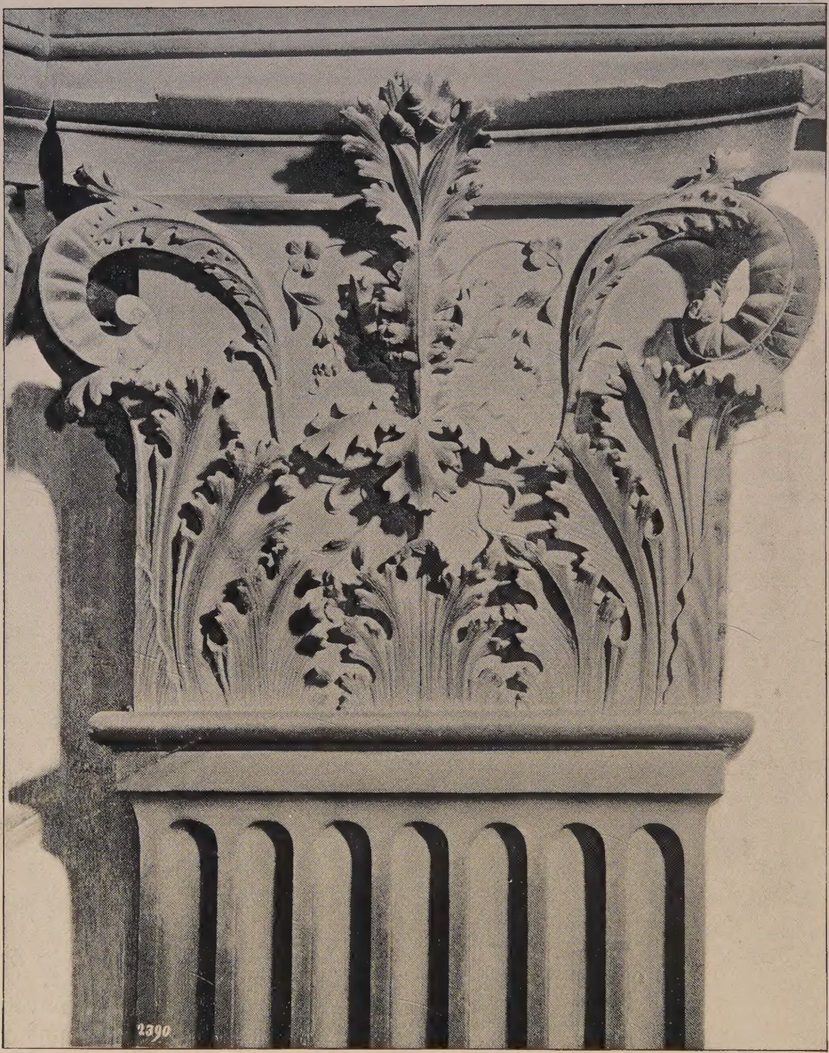

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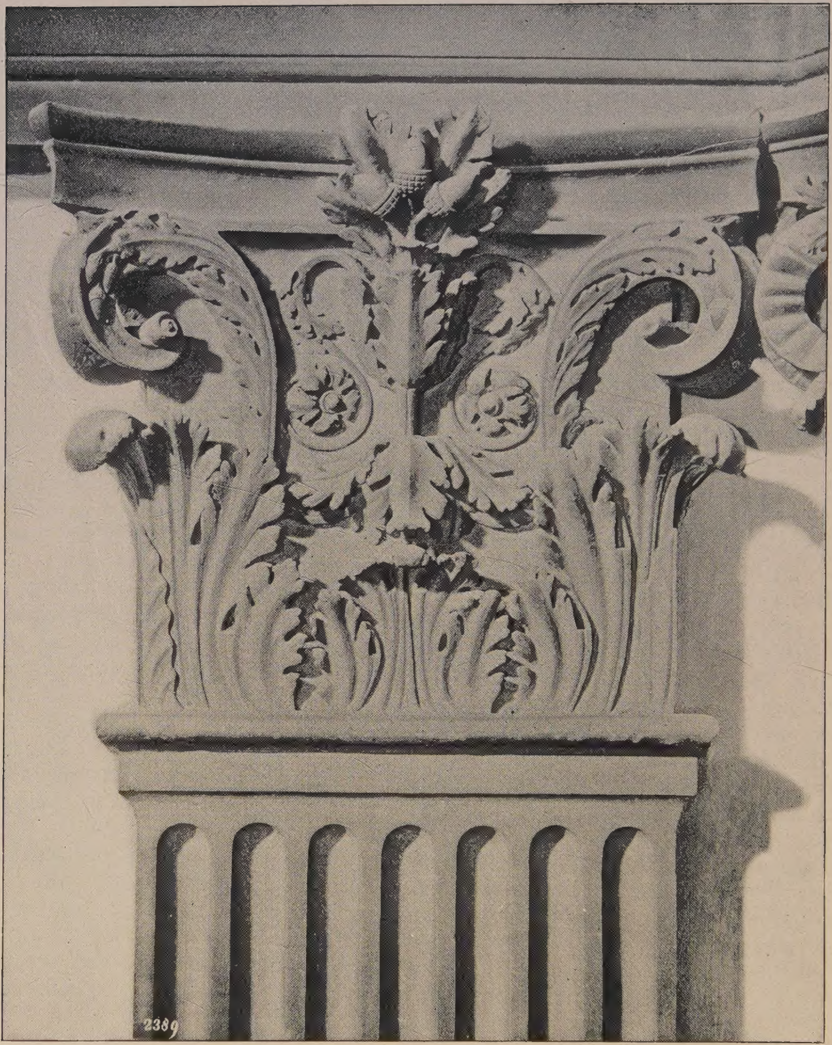
Pilaster Capital, Church of San Spirito, Florence.

lously rich display of costly marbles and elaborate workmanship, but is lacking in refinement. It was built during the reign of the Grand Duke Ferdinand I. in 1599, by the Senator Giovan Battista Michelozzi, who employed Giovanni Caccini to carry out the work in mosaic. The manufacture in Florence of *pietra-dura*, or mosaic, was then controlled by the government, having been introduced as a royal industry by the Grand Dukes Francis I. and Ferdinand I. The rich detail of the choir, altars and chapels will well repay careful study, although there is ample room for criticism in the more important considerations of mass and distribution.

Sansovino's beautiful detail is well illustrated in the series of delicate but extremely vigorous and masterly pilaster capitals from the sacristy shown in the plates of this issue. There are few examples of this treatment which can surpass them in design and execution. The form of the bell is remarkably vigorous, and at the same time has a subtlety of line which is almost equal to the work of the best Greek period. The acanthus is of the best Renaissance type, strongly and crisply modelled and well distributed. The volute form suggests the Roman Composite capital, but there is a virility in these examples which the Romans failed to attain. Although in some instances there is a very marked departure from classic models by the introduction of figures, masks, festoons and vases, this is done with so much restraint and thorough appreciation of balance and fitness to the general form that it adds to the interest of the series as a whole, and cannot be considered otherwise than as an improvement.

The capital is the portion of an architectural order which most frequently gives the suggestion by which one order is distinguished from any other. It cannot be said that it is the distinguishing feature, for there is no one characteristic which marks an order as different from any others. The distinction is very complex, and is the result of differences in both proportion and detail. But, to the casual observer, the capital is the first feature to attract attention, and is the most familiar distinction, even to the cultivated student. Although the proportions and details of the classic orders may be used without columns or pilasters, and the name "order" be properly applied to the resulting structure, it is customary to consider the column or pilaster as an essential element of an order. The Greek anta or pilaster was the ornamental finish applied to the wall of a structure as a transition from the wall to the colonnade. From the time of the Greeks to the present this has been the accepted treatment in classic and Renaissance buildings. The Renaissance architects, however, adopted the pilaster as an independent decorative feature, and varied its proportions and design to suit their requirements. The pilaster is often spoken of as the projection or development of a column. In fact it is neither, but is, rather, a compromise between the two. Its proportions, to harmonize with a corresponding column where it is used in the manner of the best Greek or Roman examples, differ materially from those of the column. The shaft is sometimes wider at the base than at the top, and is sometimes made with entasis to correspond with the column; but, on the other hand, this correspondence is frequently disregarded, and the tapering shaft replaced by one of the same width from top to bottom, or even wider at the top than at the base. In Renaissance work this arbitrary treatment is constant in all details, despite the theoretical rules of Vitruvius, Palladio and Vignola.

From the time of the empire the Romans seldom used any but the Corinthian order. Richer than the others, well adapted to the large dimensions of their monumental buildings, it satisfied the demands of the Roman taste and requirements. But in the decadence of the empire the form of the classic capital became strangely perverted. A mixture, which is known as the *Composite*, was made from the Ionic and Corinthian capitals, but it is only a graceless amalgamation of two elements which were designed to be distinct. In the Composite capital the Romans introduced figures, winged victories and eagles; they ornamented the abacus,



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Pilaster Capital, Church of San Spirito, Florence.

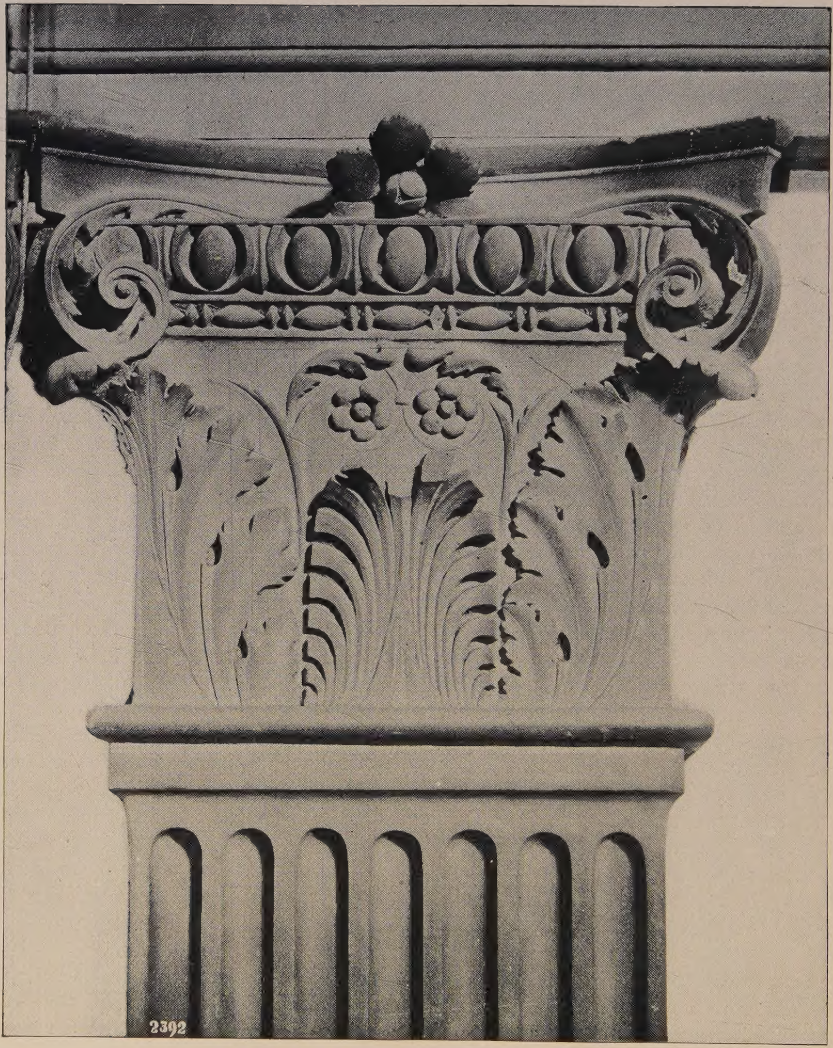
and in this important part of the decoration, sought rather rich elaboration than that refinement of profile which the Greeks had attained. When, under the Merovingian kings, the French wished to erect new buildings upon the ruins which were scattered over the country, they were not hindered by lack of material: sculpture was a lost art; consequently they employed in the construction of new buildings, all the old fragments which they could collect. Columns and capitals of different diameters and different heights, good and bad together, were used in the same building. Not even the ancient basilicas of Rome could show such a reunion of antique fragments. This diversity of ornamentation, imposed by necessity, accustomed their eyes to see capitals very different in composition, style, age and origin united in the same building. When the supply of these antique fragments was exhausted, it became necessary to supply the demand with new-made works; and the sculptors from the sixth to the ninth century sought to copy the remains of the Roman designs which they had before them. These imitations, made by unskilled hands, with clumsy tools, and without any conception of fitness, were only ill-formed counterfeits of their classical prototypes. At the same time it should be remembered that from this epoch originated a veritable revolution in the manner of employing capitals, for this member of the column was now employed with more regard for its true function than had been evinced by either the Greeks or the Romans. To make clear the importance of this change of function it is necessary to trace certain intermediate steps. The Greek orders are made up of the column with its capital supporting an entablature, or in other words, a lintel construction comprising the architrave, the frieze and the cornice. The same is true of the Roman orders. Before the last years of the declining Roman empire there were no columns either Greek or Roman without entablatures; and it is only much later, in the buildings of the decadence, and only there in rare instances, that the Roman archivolt is placed on the capital without an intervening entablature. In the Greek and Roman orders, the capital is more a stopping-place intended to satisfy the eye, than a necessary element in the stability of the building, for the architrave does not overhang the shaft, and the capital is (from the point of view of stability) a useless member of which the projections on two sides support nothing. In the Temple of Agrigentum, for instance, the face of the architrave and the face of the shaft at the top are in the same vertical plane, while the capital projects beyond this plane. If the projecting portion were cut away the architrave would still rest as firmly on the shaft. The Athenians, with their usual discrimination, were evidently struck with this defect, for in the construction of the Parthenon they made the architrave project beyond the face of the column. The function of the capital is there well marked; it is a corbelling placed upon the cylindrical shaft of the column to give a larger bearing to the architrave. These refinements escaped the Romans; they only saw in the capital an ornamental feature and did not appreciate the advantage of using the spreading bell to carry an architrave wider than the upper diameter of the column.

With the beginning of the Middle Ages the entablature disappeared entirely, not to return until the sixteenth century, and the capital with its abacus carried an archivolt without any intermediate member. By the addition of corbels the transition was made from the cylindrical necking to a square abacus which received the springing of the arch; thus the capital assumed a useful function. It was employed in this way until the time of the Renaissance, when the classic forms were revived and modified.

The useful or constructive capital of the Romanesque period was followed by the Gothic capital which also served a truly constructive purpose; but its form was almost infinitely varied, and its purpose frequently disguised, if not entirely lost sight of.

XXV. TO XXXII.

PILASTER CAPITALS FROM THE CHURCH OF S. SPIRITO, FLORENCE.



XXVIII.

Pilaster Capital, Church of San Spirito, Florence.

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The charter applied for by the T Square Club, the leading architectural organization of Pennsylvania, and one of the foremost in the country, has just been granted in the courts of Philadelphia; and the club is therefore duly incorporated under the laws of the State of Pennsylvania.

Although but now entering upon its corporate existence, this Club has been an energetic organization and a moving factor in the field of its profession for the past fourteen years, having been organized in 1883. The following well known architects were the founders: Walter Cope, John Stewardson, Wilson Eyre, Jr., R. G. Kennedy, Lindley Johnson, Arthur Truscott, George Paxson, Charles L. Hillman, Clement Remington, Frank Price, Louis C. Baker and Mr. Carlton.

The purposes of the club as set forth in the charter and in its constitution are: "To promote the study and practice of architecture and the kindred arts, to afford its members opportunities for friendly competition in design, and to further the appreciation of architecture by the public."

The subscribers to this charter, who constitute the present officers of the club, all of whom are well known Philadelphia architects or draughtsmen, are: David Knickerbacker Boyd, President; Edgar V. Seeler, Vice-President; George B. Page, Secretary; Horace H. Burrell, Treasurer; Walter Cope, Louis C. Hickman, and Charles Z. Klauder, Executive Committee; Adin B. Lacey, Percy Ash and Charles E. Oelschlager, House Committee.

The T Square Club has made its influence felt in various municipal and national affairs; has passed important resolutions on progressive local and other matters, and last fall conducted the Architectural Exhibition in connection with the regular exhibition of painting and sculpture at the Pennsylvania Academy of the Fine Arts. This exhibition was one of the most successful ever held there or elsewhere, being the first in America to contain so many thoroughly representative contributions from foreign architects.

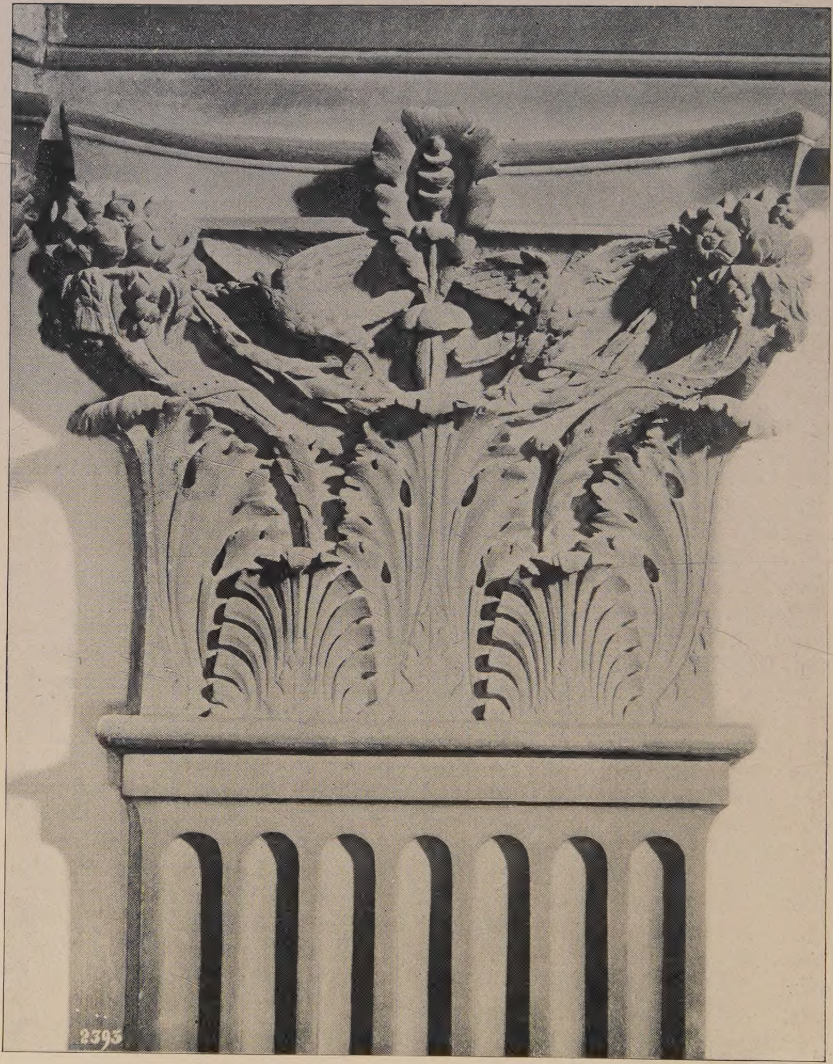
This fall the club will again hold an Architectural Exhibition, which it is intended shall surpass any previous one, both in the number and the interest of the exhibits. Representatives of the club are now in England and France securing the best drawings; and a number of exhibits are promised from other countries.

The club has also sent Mr. Albert Kelsey to represent it at the International Congress of Architects to be held in Brussels, Belgium, in the latter part of this August.

The Travelling Scholarship in Architecture awarded by the University of Pennsylvania has for several years past been won in every case by a member of the T Square Club. This club in 1889 was awarded the Hinkle gold medal for the best club display at the national exhibit of architectural drawings and sketches at Cincinnati, and in 1895 was also awarded the medal given by the St. Louis Architectural Club for the best club exhibit.

The T Square Club with the University of Pennsylvania, the Pennsylvania Academy of the Fine Arts, the Fine Arts League, the American Institute of Architects and other leading organizations co-operate in all movements for the advancement of art and art matters, whether of local or national interests or benefit.

The Club meets once a month, and at each meeting has interesting competitions among its members upon architectural and decorative subjects. At various times lectures are given which are open to all members of the profession; and the season is occasionally marked by social entertainments. The club consists of one hundred and fifty members, and numbers among its workers all the leading architects of



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Pilaster Capital, Church of San Spirito, Florence.

Philadelphia. These men, by their lectures and criticisms at the meetings, give an invaluable assistance to the draughtsmen and younger members, who unite with them in an *esprit de corps* so essential to the advancement of this or any other profession or high object.

The club having recently removed from the School of Industrial Arts Building, is contemplating the occupation of a building in the central part of Philadelphia, which it proposes to fit up for its own uses. Here it will still further increase its usefulness and continue to widen its scope of influence. An idea of its energetic policy may be obtained from the following extract from the introduction to this year's book of programmes for the competitions: —

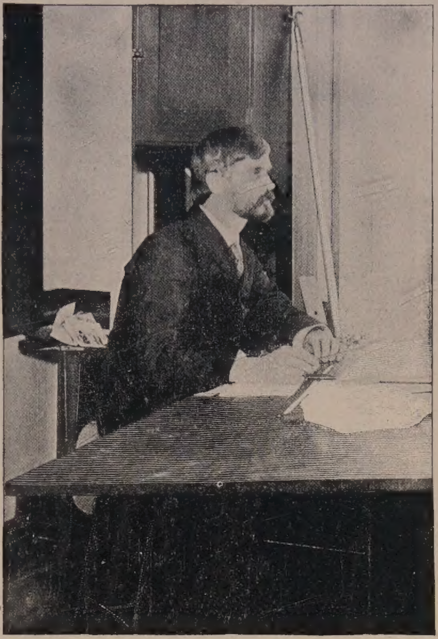
"Our membership is large. The scope of our work and influence is extending. We have reached a position which carries with it a responsibility to the community.

A high standard of design and criticism among ourselves and an enthusiastic participation in the monthly competitions will be not only of direct benefit to the individual members, but will enable us to take an aggressive attitude as an organization in the struggle against bad architecture."

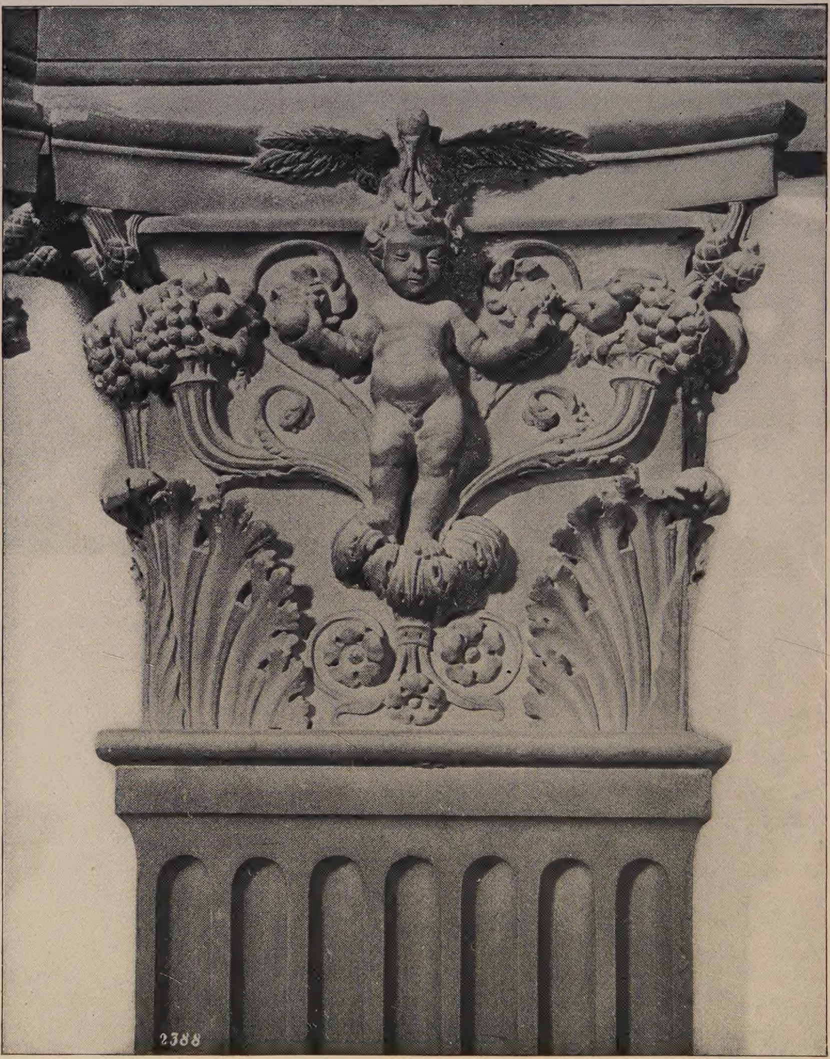
David A. Gregg.

There is no more familiar name to American architects and draughtsmen than that of D. A. Gregg; but few of those who know his name and work, know anything of him personally. This is partly due to the nature of the man himself, the kind of nature familiar to us all; an earnest worker, quiet and retiring and completely absorbed in the work to which he has devoted his life. Although known to the profession only as one who presents the designs of others in attractive form, he is, unlike the majority of those who give their attention to making architectural perspectives, a trained architect, capable of conceiving and carrying out the design which he renders. It is from choice, after years of experience in the general details of architectural practice, that he is now confining himself to this one branch of the work.

He was born in Vermont, the son of a Methodist minister, and received his early instruction at the Fort Edward Institute and the Plattsburgh Academy in New York State. Like so many others who have made a mark in after life, he very early showed a taste for the work in which he has since distinguished himself. The incidents of his early youth recall Vasari's account of the boyhood of Jacapo Sansovino, the builder of the Library of St. Marks in Venice, and one of the most illustrious architects and sculptors of the Italian Renaissance: "In his first years the boy was sent, as is usual, to acquire the rudiments of learning, wherein he displayed much intelligence. He soon began to study drawing of himself and gave evidence, in a certain sort, that nature had disposed him to the study of design rather than that of letters, since he went very reluctantly to school and was most unwilling to undertake the difficult acquirement of grammar."


David A. Gregg.

When a boy only eleven or twelve years old young Gregg made architect-



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Pilaster Capital, Church of San Spirito, Florence.

ural drawings, first of the houses in which he had lived, and a little later, a series of six drawings of the church steeples of the town; and without instruction he laboriously copied, line for line, the plates in an elaborate book on perspective, taking all the evenings of one winter for the task — as task it must have been. While at school he constantly employed his leisure in sketching in pencil and ink-wash; and the crowning event of his boyhood was the purchase of a box of water colors for $17.00, for which he sent to New York.

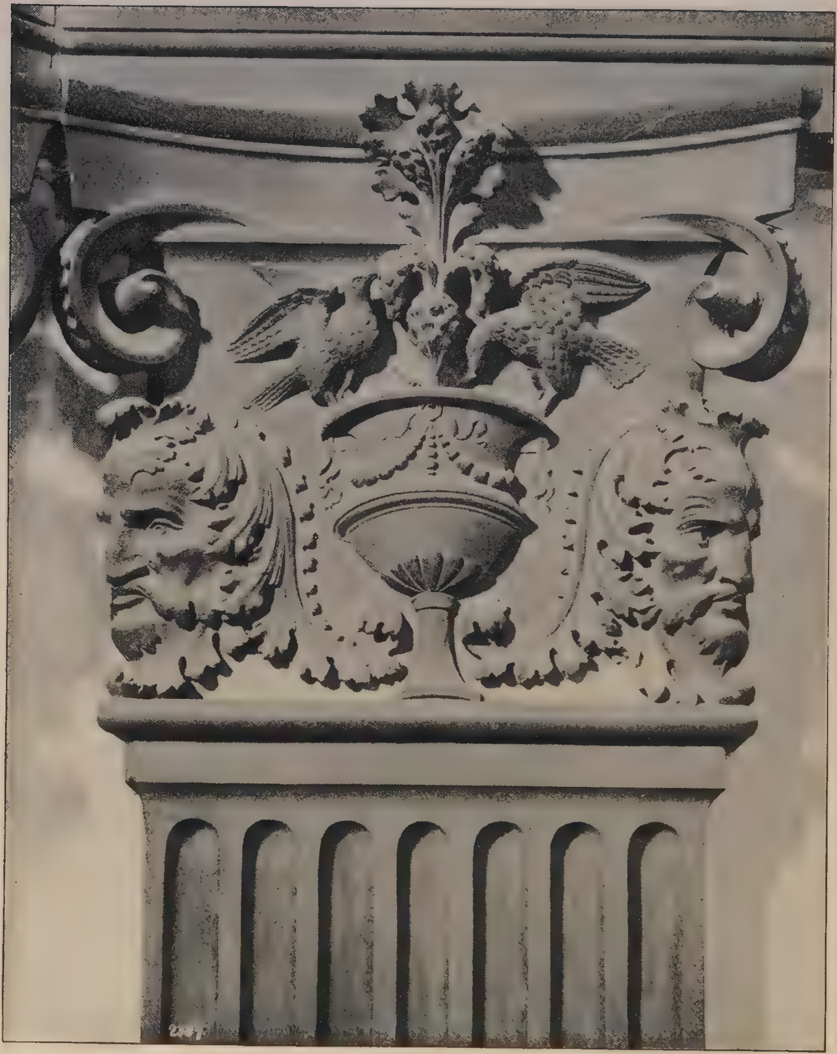
Soon after this, upon leaving school, he was unexpectedly able to go to New York where he entered the office of the late S. D. Hatch, a friend of his father, and obtained his first practical experience in architecture. Always alive to the importance of pushing forward his studies, he employed his time outside office hours in reading and drawing, attending the evening classes of the Cooper Institute, where he drew the "orders." At this time he read and was much impressed with Ruskin's architectural teachings in the "Seven Lamps" and the "Stones of Venice." After leaving Mr. Hatch he secured a place in the office of the late Henry Fernbach, in whose employ he remained for several years.

Having now spent a number of years in New York as student and draughtsman, the desire for greater opportunities for improvement led to a trip abroad, where Mr. Gregg remained for two years, employed in the offices of several London architects, devoting his leisure to study.

He at first obtained a place in the London office of Messrs. Bell & Roper in the Temple Grounds, in the very rooms once occupied by Oliver Goldsmith. Here, under Mr. Roper, he had unusual scope, as the designing and detailing to scale was done in this office, and all the remaining work carried out in Manchester, where this firm had a second office. The working hours were from ten until five, and the office was closed entirely on Saturdays. This was a remarkable opportunity, and Mr. Gregg improved it to the utmost, spending his time in study and in sketching-trips to the towns outside London, and in the South Kensington Museum. He attended the evening classes at Heatherly's famous school, drawing from the cast; and the Royal Academy Architectural School, which was then in charge of Mr. R. Phene Spiers, successively under the instruction in design of R. Norman Shaw, G. E. Street and J. L. Pearson. After six months of this work he successfully passed the examinations and was admitted as a "student" of the Royal Academy. While living in London he occupied chambers in Bloombury Square, in the house once used by Disræli. During this period Mr. Gregg visited Paris, at the time of the Exposition of 1878.

"Much of my work in London had come to be perspective drawing and attempts at pen rendering, which I greatly enjoyed," says Mr. Gregg; "and I began to wish for a position where I might do it largely. I corresponded with the editors of the *American Architect;* and in 1879 came to Boston and began work for the paper, continuing with them with much interest and pleasure for fifteen years." This connection has now been severed and for the past two years Mr. Gregg has been continuing his work independently. In 1887 he was requested by the Massachusetts Institute of Technology to take charge of a class in "Pen and Ink Rendering" in the Architectural Department, and he has since occupied a place as one of the corps of instructors.

Any attempt to describe Mr. Gregg's work, or even to illustrate it with examples, would seem unnecessary, for it is thoroughly familiar through many recent exhibitions of architectural drawings and the plates of the architectural papers. Probably no single individual in this country has made the drawings of so many important buildings. His work has the great advantage of being attractive to both the architect and the layman; and is always well thought out, simple, direct and expressive. No one has had so great an influence upon the manner of expression adopted by American architectural draughtsmen as Mr. Gregg. His imitators are without number: this in itself is sufficient evidence of the value of his work.



XXXI.

Pilaster Capital, Church of San Spirito, Florence.

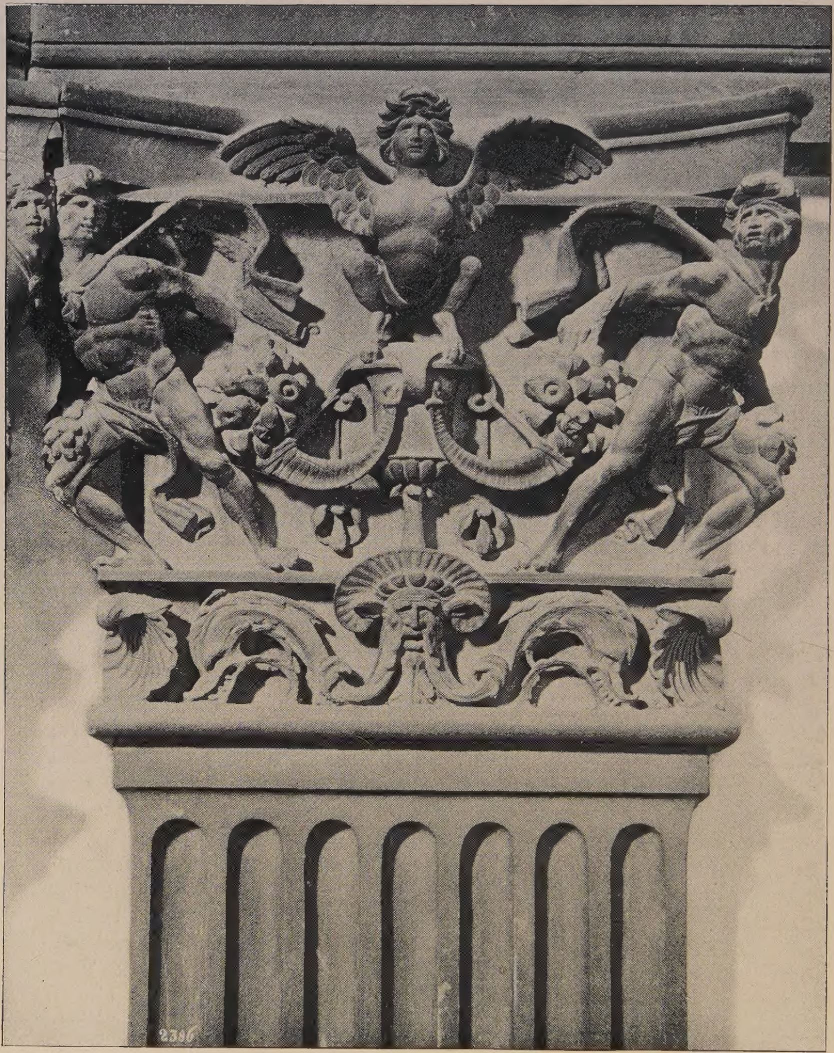
Notes.

We learned the other day of one of those fortunate chances that sometimes occur in business as elsewhere. It concerns the choice of stone for the large polished columns with bronze Corinthian capitals, which support the dome of the new library building of Columbia University. This building, it will be remembered, forms the central feature in the group of new buildings of the University on Morningside Heights. A representative of a company owning four hundred acres of undeveloped quarry lands in the side of Ascutney mountain, near Windsor, Vt., whose product is a so-called granite (though, in fact, it is a syenite, or more nearly that than granite, and should be classed commercially with the high-grade ornamental marbles,) was about to return from a fruitless trip to New York in the company's interest, when he made "one more call," with not much hope of success, at the office of McKim, Mead & White. It so happened that the day before a "very blue meeting" had been held in their office by Mr. Low, who is one of the donors of the library building, the architects themselves and the contractor, Mr. O. W. Norcross. To suit the scheme of color of the interior of the dome-capped reading room of the library, a dark green and white-flecked marble had been determined on, from Connemara, on the west coast of Ireland. Two hundred tons of stone were needed for the library's polished columns, between twenty-seven and twenty-eight feet high and about four feet thick. At this consultation meeting it was announced that fifteen tons had been quarried, when the supply gave out; and now just when, as Mr. McKim afterward expressed it, they knew not where in the world to turn for a suitable stone to replace the Irish marble, a sample of the right thing was brought them from Vermont — a large deposit lying almost at their doors. An order was placed at once and last winter was spent in getting out the columns and opening the quarries for general business. In reply to a letter asking the architects for their opinion of this stone for architectural uses, now that the columns are in place, the following answer was received at the office of the granite company's treasurer in Boston: —

> NEW YORK, June 11, 1897.
>
> WINDSOR GREEN GRANITE CO.,
> 50 Bromfield St., Boston, Mass.
>
> *Dear Sirs:* The use of the green Mount Ascutney granite in the sixteen columns of the interior of the reading room of the new University Library of Columbia, has more than fulfilled our expectations.
>
> The formation of the granite, its crystalization — full of light — and especially its varying tones, from deep bronze-green to paler hues of bluish and grayish cast, and great beauty, adapt it for use in monumental work and buildings of public character.
>
> We congratulate you upon the possession of a stone for which there has long been a demand and the great usefulness of which in the future cannot be doubted.
>
> Very truly yours,
> McKIM, MEAD & WHITE.

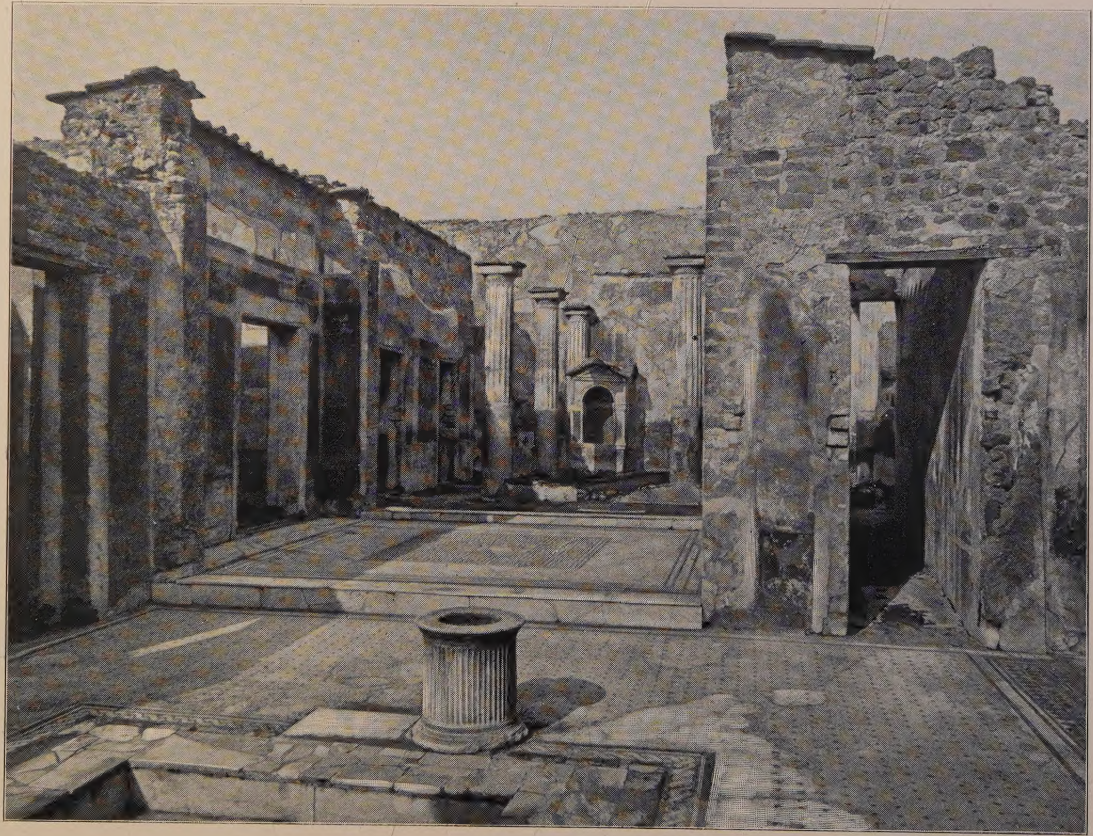
In 1882 the acid chambers of the Bowker Fertilizer Company at Elizabethport, N.J., were roofed with Warren's Natural Asphalt Roofing, and in spite of the fumes and gases from the sulphuric acid used beneath it and the ordinary atmospheric wear on top, this roofing has remained in good condition and is soft and pliable. It is such tests as this that have given the Warren Chemical & Manufacturing Company the inside track on roofing large factory buildings, and as they contract to lay roofs in all parts of the country, no architect should neglect to consult them on any important roofing question.

The forthcoming monograph devoted to the Municipal Buildings of the City of Boston, designed and built under the direction of Mr. Edmund M. Wheelwright, will be notable as the first American example of a class of books which has long been considered as one of the necessities in an architect's working library. It will treat the subject exhaustively from all points of view Mr. Wheelwright's buildings are already widely known to the profession from published sketches, but working drawings and technical descriptions are required for a thorough understanding of their value.



XXXII.

Pilaster Capital, Church of San Spirito, Florence.



XXXIII.

House of the Tragic Poet, Pompeii.